

# AMP3085A SOLID STATE HIGH POWER AMPLIFIER

## FEATURES

Class AB solid-state linear hybrid Advanced technology design  
Designed for high power broadband instantaneous wide Bandwidth  
Suitable for all single channel modulation standards  
Built-in protection circuits  
High reliability and ruggedness  
Switching control for 1-2usec switching



## ELECTRICAL SPECIFICATIONS: 50Ω, 25°C

| Parameter                 | Specification               | Notes                       |
|---------------------------|-----------------------------|-----------------------------|
| Operating Frequency Range | 6.0 - 12.0 GHz              |                             |
| Power Output @ Past       | 100 Watt Min / 120 Watt Typ | CW                          |
| Power Gain                | 50 dB Min                   | 0dBm or less for rated Pout |
| Power Gain Flatness       | 3.0 dB p-p Max              | Constant input power        |
| Input Return Loss         | -10 dB Max                  |                             |
| Harmonics                 | -25 dBc Max                 | At rated Pout               |
| Spurious                  | -60 dBc Max                 | Non-harmonics               |
| Noise Figure              | 10 dB Max                   |                             |
| Operating Voltage         | 32 VDC Nom                  |                             |
| Current Consumption       | 23 Amp Max / <20 Amp Typ    | At rated Pout               |
| Input Power Protection    | +3 dBm Max                  | <10 Sec without damage      |
| Load VSWR Protection      | 5 : 1 Max <sup>1</sup>      | < 1 minute at rated Pout    |

1 Modules could be damaged due to excessive VSWR beyond 1 minute

## ENVIRONMENTAL CHARACTERISTICS

| Parameter                  | Specification                 | Notes          |
|----------------------------|-------------------------------|----------------|
| Operating Case Temperature | -20 to +75 °C                 |                |
| Storage Temperature        | -40 to +85 °C                 |                |
| Relative Humidity          | up to 95 %                    | Non-condensing |
| Altitude                   | 3000 meters                   |                |
| Shock & Vibration          | Normal transport <sup>1</sup> |                |

1 MIL Spec available for quotation

## MECHANICAL SPECIFICATIONS

| Parameter                      | Specification              | Notes                |
|--------------------------------|----------------------------|----------------------|
| Dimensions L x W x H           | 180 x 200 x 27 mm          | Excluding connectors |
| Weight                         | 4 Kg.                      |                      |
| RF Connectors In/Out           | SMA female / Type-N female |                      |
| DC Power / Interface Connector | 7-Pin Hybrid D-Sub         |                      |
| Cooling                        | External Heatsink          | Forced air required  |

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## D-SUB CONNECTOR PIN ASSIGNMENT

| Pin | Function       | Description                                               |
|-----|----------------|-----------------------------------------------------------|
| 1   | NA             | Reserved                                                  |
| 2   | NA             | Reserved                                                  |
| 3   | Current Sensor | $I_D @ 20\text{mV}/100\text{mA Typ}$                      |
| 4   | Temp Sensor    | $V_T @ 10\text{mV}/^\circ\text{C} + 500\text{mV Typ}$     |
| 5   | Shutdown       | Enable = TTL "High" (>3.2V) or Open / Disable = TTL "Low" |
| A1  | VDD            | 32VDC                                                     |
| A2  | GND            | Ground                                                    |

## OUTLINE DRAWING

